CLAIMS

1. A process for preparing a lithium amide composition in which in a first step lithium metal is brought into contact with ammonia to form lithium bronze and in a second step the lithium bronze is reacted with a 1,3-diene or an arylolefin in the presence of a solvent wherein the temperature is maintained at or below the boiling point of ammonia.

2. A process according to Claim1 wherein in the first step the lithium metal is brought into contact with ammonia by charging the ammonia to the lithium metal.

3. A process according to Claim 1 or 2 wherein the 1,3-diene or arylolefin is butadiene, isoprene, piperylene, dimethylbutadiene, hexadiene, styrene, methyl styrene, divinylbenzene, naphthalene or anthracene.

4. A process according to Claim 3 wherein the 1,3-diene or arylolefin is styrene, methyl styrene or divinylbenzene.

5. A process according to any one of Claims 1 to 4 wherein the solvent is pentane, cyclopentane, hexane, heptane, octane, cyclohexane, toluene, xylene, cumene, ethyl benzene, tetraline, diethyl ether, tetrahydrofuran (THF), 2-methyl-THF, tetrahydropyran, diisopropyl ether, dibutyl ether, dioxan, methyl-tert-butyl ether or glycol ether.

6. A process according to any one of Claims 1 to 5 wherein four to five equivalents of anhydrous ammonia per mole equivalent of lithium metal are present in the first step.

7. A process according to any one of Claims 1 to 6 wherein the temperature of both reaction steps is maintained between -33 and -78°C, more preferably between -35 and -65°C, and most preferably at -40°C.

8. A process according to any one of Claims 1 to 7 wherein excess ammonia is discharged by distillation at reduced pressure at a temperature of between -33 and -78°C and wherein the resulting lithium amide composition comprises a molar ratio of lithium amide : ammonia greater than 1 : 0.5 ($LiNH_2$: NH_3), more preferably comprises a lithium amide : ammonia molar ratio greater than 1 : 1 ($LiNH_2$: NH_3).

9. A lithium amide composition obtainable by a process according to any one of Claims 1 to 8.